

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001601**Date Inspected:** 21-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei & Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

This Quality Assurance (QA) Inspector observed various fabrication and welding practices at Zhenhua Port Machinery Company (ZPMC) on Changxing Island in Shanghai, China today for the Self Anchored Suspension Bridge for San Francisco, California.

**Orthotropic Box Girder (OBG)**

In Bay 1 this QA Inspector observed the milling of plate edges, beveling of partial joint penetration (PJP) preparations, machining of 2 millimeter radius on edges of plates and drilling of bolt holes using hardened washer guides of un-bent closed u-rib plates. This QA Inspector also witnessed the simultaneous bending of the close u-rib panels in compliance with the special provisions. Power sanding of PJP welding preparations was observed on various closed u-ribs and deck panels.

This QAI observed the grinding of weld preparation on the internal closed u-rib splice weld DP001-001-009.

This QAI observed quality control in the process of performing ultrasonic testing of the PJP welds on the production monitoring test (PMT) however the Task Leader, Mr. Robert Cuellar pointed out that the paint needed to be removed from the closed u-rib surface prior to the ultrasonic testing being conducted.

This QAI noted various members for the orthotropic box girder being stored outside without sufficient covers in place. Welded members were wet with light rust and some water puddles being observed.

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## WELDING INSPECTION REPORT

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This QAI observed ZPMC welder Han Chang Hou, welder identification 059464 welding with the submerged arc welding process (SAW) in Bay 2 on deck panel DP053-001. The weld, a complete joint penetration (CJP) splice weld, DP053-001-011 was being welded with welding procedure specification WPS-B-07-2221-B-L26-S-1 and some of the essential variables were checked and found to be as follows; voltage 30.5, amperage 483, pre-heat 36° Celsius and the travel speed was 428 millimeter per minute.

This QAI informed the Task Leader, Mr. Jimmy Cochran that ZPMC production in Bay 1 was setting up to perform gas metal arc welding (GMAW) of the roots on a second deck panel DP13 PL10A. After hearing the conversation ZPMC Production reversed the welding gantry direction and proceeded to set up to perform the SAW welding on the Production Monitoring Test (PMT).

In Bay 3 observed fitting and tack welding of t-stiffeners to side plates, setting up of side plates on welding gantry for fillet welding and preparation and tack welding of bottom plates.

### Summary of Conversations:

No conversations were held today.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Berger,Bruce	Quality Assurance Inspector
<b>Reviewed By:</b>	Cochran,Jim	QA Reviewer

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